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# FIBRE BOX INDUSTRY

*Forty Fifth Edition*

# 1985 ANNUAL REPORT

FIBRE BOX ASSOCIATION

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This 1985 Annual Report of the Fibre Box Industry is the 45th in the series published by the Fibre Box Association. An annual voluntary census of non-member information is combined with audited data from member box makers to provide accurate data on the corrugated box industry. All shipments are of finished products: sales of sheets by converters to sheet plants are deducted. Additional data for this report has been provided by the American Paper Institute and the Bureau of Labor Statistics of the U.S. Department of Labor.

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Shipments in 1984 were the best year the corrugated container industry in the United States ever had but 1985 was not far behind. At 267.5 billion square feet, shipments were less than one-half a percent below the 1984 record level. Dollar volume at just under $11.5 billion, was only 0.7% below 1984. It is very disappointing when each year does not bring new records but with corrugated shipments so closely parallelling Industrial Production in the U.S., it is not too surprising that 1985 did not exceed 1984. Every indication is, however, that the 1986 volume of shipments will, once again, set a record—not by a great deal, but by 2% or 3%.

As had been the pattern for several decades, different areas of the country experienced different rates of growth in 1985. The Southeast and the South Central Regions grew faster than in 1984. The East Central was even and the other three areas of the country were down slightly. So, the phenomenon of the Sun Belt growing faster than the Snow Belt continued.

In 1979, the industry had a record number of plants in existence—1,460. During the following four years the number declined, then it turned and now in 1985, we equalled the all time high with 1,460 plants. The difference is that in 1985 the industry had 19 fewer converters and 19 more sheet plants than in 1979. The number of employees followed a similar trend and in 1985, the industry had 63,000 hourly workers on the payroll.

Over the past few years, there have been few changes in end use distribution. The Food and Beverage industries continue to be the largest single user for corrugated boxes. Paper and printing, the next largest has been increasing as has Chemicals.

Two of the more interesting trends in the industry are closely correlated. For many years, the percentage of production which was either double wall or triple wall, has been increasing. In 1960, the percentage was 5.4%, in 1985, it was 8.8%. At the same time, and not surprisingly, the average weight of corrugated board has been increasing and in 1985, stood at 139 pounds per thousand square feet.

All projections are for a good 1986 and, depending to some degree on the economy, an even better 1987.

Wm. P. Kinnune

Thomas J. Muldoon

William P. Kinnune
President

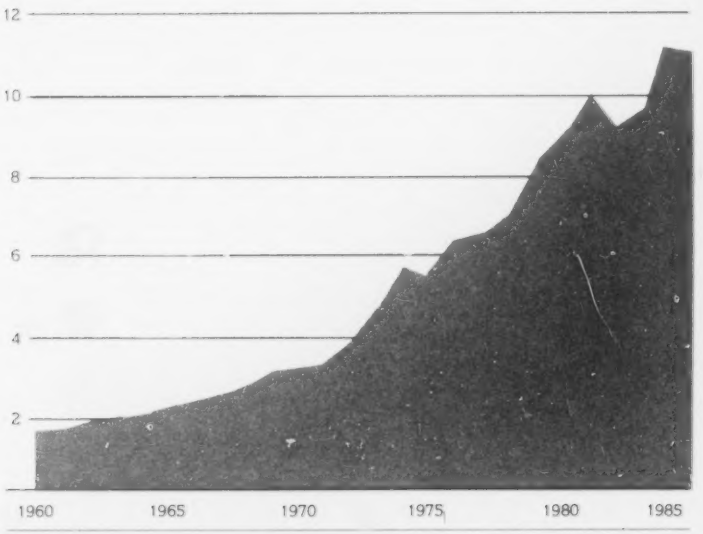
Thomas J. Muldoon
Executive Vice President

# Industry Value of Shipments

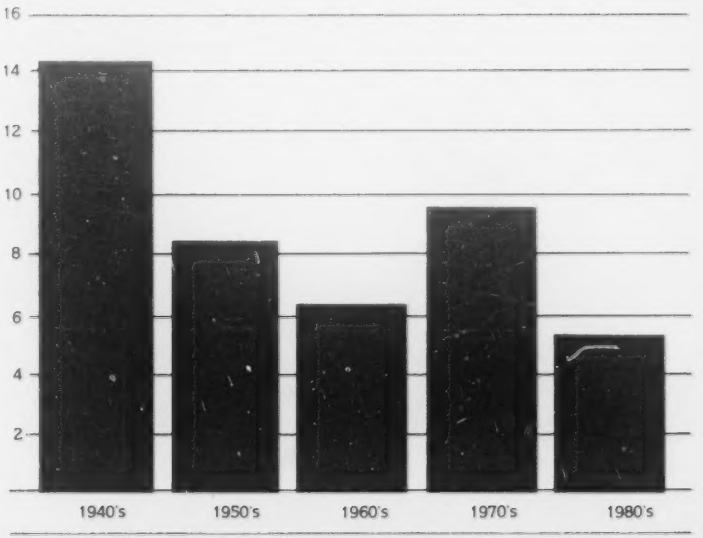
Billions of Dollars

| YEAR | TOTAL | CORRUGATED | SOLID FIBRE | YEAR TO YEAR GROWTH |
|---|---|---|---|---|
| 1960 | $1,791,171,100 | $1,746,525,600 | $44,645,500 | - 0.3% |
| 1961 | 1,820,090,000 | 1,777,068,100 | 43,021,900 | + 1.6 |
| 1962 | 2,000,415,600 | 1,956,573,300 | 43,842,300 | + 9.9 |
| 1963 | 2,067,429,400 | 2,027,179,900 | 40,249,500 | + 3.3 |
| 1964 | 2,213,855,300 | 2,175,406,500 | 38,448,800 | + 7.1 |
| 1965 | 2,406,758,600 | 2,367,541,900 | 39,216,700 | + 8.7 |
| 1966 | 2,730,785,600 | 2,673,737,100 | 57,048,500 | + 13.5 |
| 1967 | 2,814,803,600 | 2,761,635,200 | 53,168,400 | + 3.1 |
| 1968 | 3,043,600,900 | 2,990,444,200 | 53,156,700 | + 8.1 |
| 1969 | 3,320,521,800 | 3,268,934,500 | 51,587,300 | + 9.1 |
| 1970 | 3,341,044,100 | 3,298,364,600 | 42,679,500 | + 0.6 |
| 1971 | 3,463,680,200 | 3,422,262,100 | 41,418,100 | + 3.7 |
| 1972 | 3,959,924,500 | 3,919,862,900 | 40,061,600 | + 14.3 |
| 1973 | 4,862,056,300 | 4,815,486,600 | 46,569,700 | + 22.8 |
| 1974 | 5,792,984,900 | 5,742,301,300 | 50,683,600 | + 19.1 |
| 1975 | 5,623,765,200 | 5,578,612,500 | 45,152,700 | - 2.9 |
| 1976 | 6,443,938,300 | 6,395,870,800 | 48,067,500 | + 14.6 |
| 1977 | 6,741,744,100 | 6,691,170,000 | 50,574,100 | + 4.6 |
| 1978 | 7,260,097,300 | 7,204,311,000 | 55,786,300 | + 7.7 |
| 1979 | 8,407,894,000 | 8,344,624,600 | 63,269,400 | + 15.8 |
| 1980 | 9,075,381,800 | 9,010,411,600 | 64,970,200 | + 7.9 |
| 1981 | 10,019,521,200 | 9,956,771,000 | 64,750,200 | + 10.4 |
| 1982 | 9,343,619,900 | 9,278,989,700 | 64,630,200 | - 6.7 |
| 1983 | 9,845,258,200 | 9,778,198,700 | 67,059,500 | + 5.4 |
| 1984 | 11,567,050,900 | 11,491,431,700 | 75,619,200 | + 17.5 |
| 1985 | 11,486,830,500 | 11,413,175,600 | 73,654,900 | - 0.7 |

**Total Value** Billions of Dollars

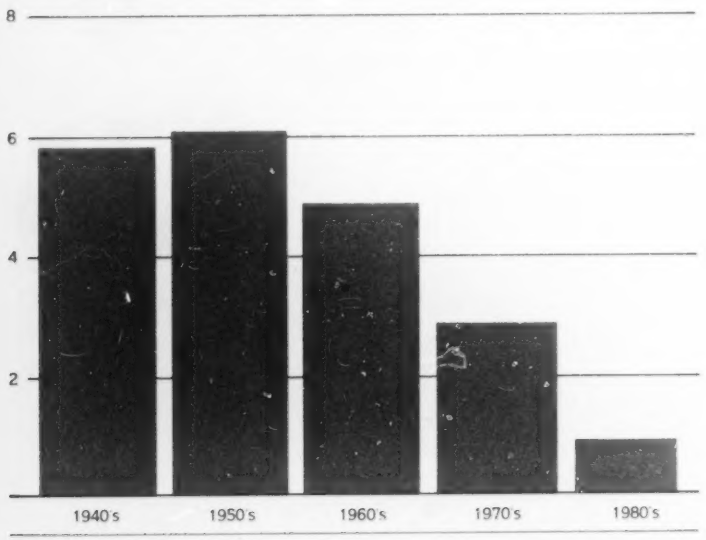



**Growth Rates by Decades** Percent

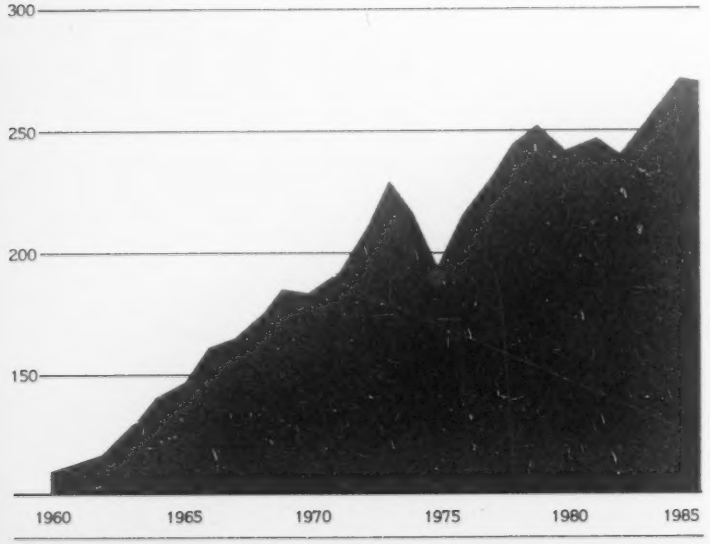


# Industry Shipments

**Growth Rates by Decades** Percent




**Total Volume** Billions of Square Feet

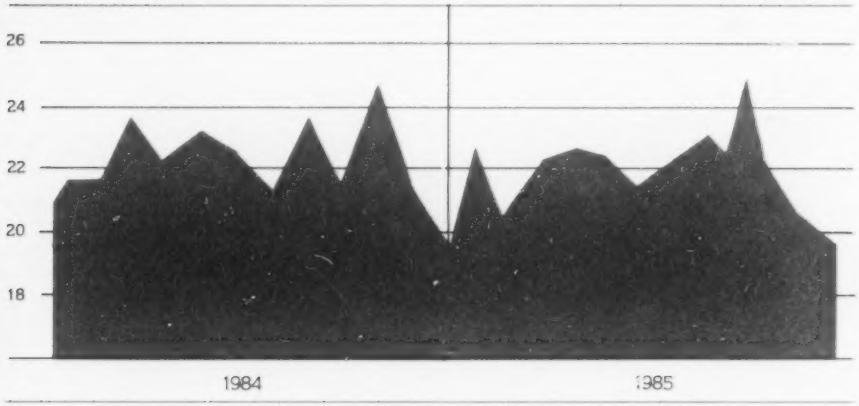



| YEAR | TOTAL | CORRUGATED | SOLID FIBRE | YEAR TO YEAR GROWTH |
|---|---|---|---|---|
| 1960 | 108.931 | 107.676 | 1.255 | - 1.0% |
| 1961 | 114.561 | 113.365 | 1.196 | + 5.2 |
| 1962 | 122.181 | 120.994 | 1.187 | + 6.7 |
| 1963 | 128.663 | 127.543 | 1.120 | + 5.3 |
| 1964 | 137.261 | 136.199 | 1.062 | + 6.7 |
| 1965 | 148.471 | 147.393 | 1.078 | + 8.2 |
| 1966 | 160.452 | 158.997 | 1.455 | + 8.1 |
| 1967 | 162.596 | 161.212 | 1.384 | + 1.3 |
| 1968 | 173.814 | 172.361 | 1.453 | + 6.9 |
| 1969 | 185.652 | 184.280 | 1.372 | + 6.8 |
| 1970 | 184.865 | 183.761 | 1.104 | - 0.4 |
| 1971 | 191.832 | 190.756 | 1.076 | + 3.8 |
| 1972 | 211.926 | 210.880 | 1.046 | + 10.5 |
| 1973 | 228.052 | 226.984 | 1.068 | + 7.6 |
| 1974 | 216.072 | 215.119 | .953 | - 5.3 |
| 1975 | 194.329 | 193.573 | .756 | - 10.1 |
| 1976 | 216.371 | 215.565 | .806 | + 11.3 |
| 1977 | 227.198 | 226.360 | .838 | + 5.0 |
| 1978 | 243.898 | 242.999 | .899 | + 7.4 |
| 1979 | 250.643 | 249.701 | .942 | + 2.8 |
| 1980 | 241.377 | 240.490 | .887 | - 3.7 |
| 1981 | 246.152 | 245.331 | .821 | + 2.0 |
| 1982 | 235.185 | 234.306 | .879 | - 4.5 |
| 1983 | 252.539 | 251.618 | .921 | + 7.4 |
| 1984 | 267.547 | 266.565 | .982 | + 5.9 |
| 1985 | 267.453 | 266.490 | .963 | - .04 |

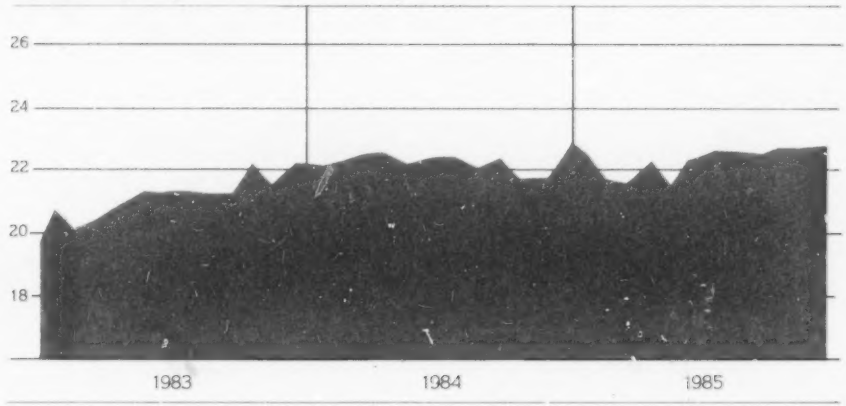
# Industry Shipments by Month & Quarter

Billions of Square Feet

**Shipments by Month** Billions of Square Feet



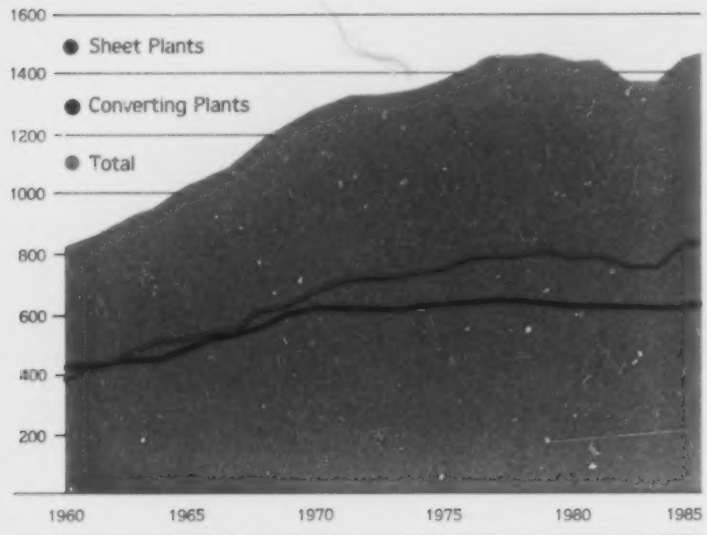

**Seasonally Adjusted Shipments by Month** Billions of Square Feet



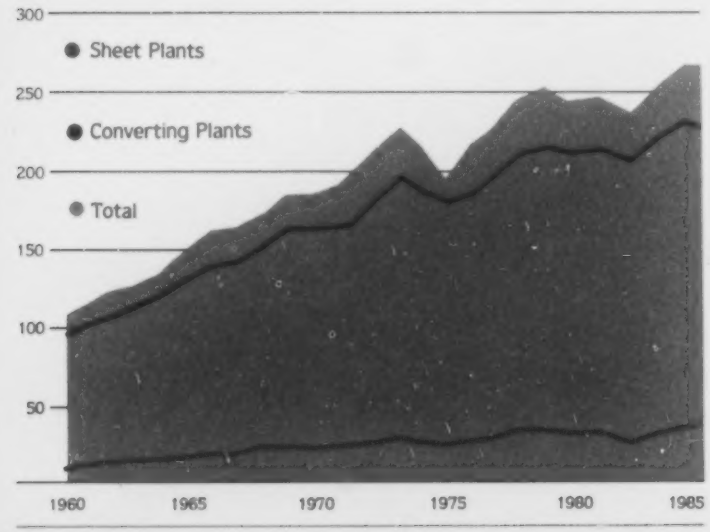

| | Jan | Feb | Mar | 1st Qtr | Apr | May | Jun | 2nd Qtr | Jul | Aug | Sep | 3rd Qtr | Oct | Nov | Dec | 4th Qtr | Year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1983** | | | | | | | | | | | | | | | | | |
| Average Week | 4.597 | 4.640 | 4.851 | 4.699 | 4.713 | 4.781 | 5.080 | 4.858 | 4.520 | 5.043 | 5.154 | 4.907 | 5.436 | 4.853 | 4.416 | 4.896 | 4.857 |
| Actual | 19.919 | 18.562 | 21.828 | 60.308 | 20.421 | 20.719 | 22.013 | 63.154 | 19.588 | 22.692 | 22.335 | 64.615 | 23.557 | 21.032 | 19.873 | 64.462 | 252.539 |
| Seasonally Adjusted | 20.844 | 19.722 | 20.052 | 60.170 | 20.507 | 20.945 | 21.245 | 62.724 | 21.233 | 21.195 | 21.210 | 64.026 | 22.383 | 21.760 | 22.052 | 65.650 | |
| **1984** | | | | | | | | | | | | | | | | | |
| Average Week | 5.019 | 5.235 | 5.284 | 5.180 | 5.307 | 5.129 | 5.190 | 5.206 | 4.923 | 5.302 | 5.225 | 5.151 | 5.532 | 4.889 | 4.497 | 4.979 | 5.145 |
| Actual | 21.748 | 21.815 | 23.777 | 67.339 | 22.111 | 23.082 | 22.489 | 67.681 | 21.334 | 23.859 | 21.772 | 66.965 | 24.892 | 21.185 | 19.485 | 65.562 | 267.547 |
| Seasonally Adjusted | 21.946 | 22.320 | 22.616 | 67.304 | 22.482 | 22.299 | 22.353 | 67.095 | 22.327 | 22.112 | 22.452 | 66.344 | 21.967 | 21.858 | 22.808 | 66.800 | |
| **1985** | | | | | | | | | | | | | | | | | |
| Average Week | 5.153 | 5.124 | 5.083 | 5.120 | 5.278 | 5.021 | 5.171 | 5.155 | 4.946 | 5.209 | 5.352 | 5.164 | 5.742 | 4.847 | 4.590 | 5.068 | 5.143 |
| Actual | 23.188 | 20.496 | 22.028 | 65.711 | 22.871 | 22.592 | 21.545 | 67.011 | 22.257 | 23.441 | 22.300 | 67.999 | 25.838 | 21.003 | 19.889 | 66.731 | 267.453 |
| Seasonally Adjusted | 22.388 | 21.926 | 21.883 | 65.718 | 22.224 | 21.882 | 22.281 | 66.360 | 22.483 | 22.412 | 22.349 | 67.431 | 22.559 | 22.565 | 22.404 | 67.933 | |
| Seasonal Adjustment | 1.0358 | .9348 | 1.0066 | 100.0 | 1.0291 | 1.0326 | .9670 | 101.0 | .9900 | 1.0459 | .9978 | 100.8 | 1.1453 | .9308 | .8878 | 98.2 | |

# Industry Shipments by Type of Plant

**Number of Plants**




**Shipments by Type of Plant** Billions of Square Feet

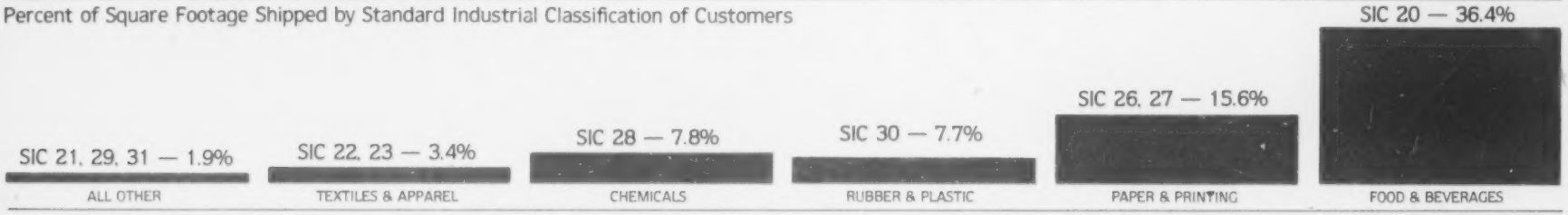



| YEAR | TOTAL | | CONVERTERS | | | SHEET PLANTS | | |
|---|---|---|---|---|---|---|---|---|
| | Billions of Square Feet | Number of Plants | Billions of Square Feet | Percent of Total | Number of Plants | Billion of Square Feet | Percent of Total | Number of Plants |
| 1960 | 108.931 | 612 | 98.991 | 90.9 | 428 | 9.940 | 9.1 | 384 |
| 1961 | 114.561 | 848 | 103.875 | 90.7 | 433 | 10.686 | 9.3 | 415 |
| 1962 | 122.181 | 881 | 109.309 | 89.5 | 443 | 12.872 | 10.5 | 438 |
| 1963 | 128.663 | 928 | 114.345 | 88.9 | 459 | 14.318 | 11.1 | 469 |
| 1964 | 137.261 | 967 | 121.531 | 88.5 | 463 | 15.730 | 11.5 | 504 |
| 1965 | 148.471 | 1,011 | 130.983 | 88.2 | 498 | 17.488 | 11.8 | 513 |
| 1966 | 160.452 | 1,065 | 140.946 | 87.8 | 519 | 19.506 | 12.2 | 546 |
| 1967 | 162.596 | 1,098 | 143.200 | 88.1 | 548 | 19.396 | 11.9 | 550 |
| 1968 | 173.814 | 1,184 | 152.497 | 87.7 | 578 | 21.317 | 12.3 | 606 |
| 1969 | 185.652 | 1,236 | 163.232 | 87.9 | 604 | 22.420 | 12.1 | 632 |
| 1970 | 184.865 | 1,294 | 163.230 | 88.3 | 623 | 21.635 | 11.7 | 671 |
| 1971 | 191.832 | 1,323 | 168.870 | 88.0 | 615 | 22.962 | 12.0 | 708 |
| 1972 | 211.926 | 1,324 | 184.452 | 87.0 | 614 | 27.474 | 13.0 | 710 |
| 1973 | 228.052 | 1,330 | 198.646 | 87.1 | 607 | 29.406 | 12.9 | 723 |
| 1974 | 216.072 | 1,358 | 189.015 | 87.5 | 619 | 27.057 | 12.5 | 739 |
| 1975 | 194.329 | 1,385 | 170.635 | 87.8 | 634 | 23.694 | 12.2 | 751 |
| 1976 | 216.371 | 1,427 | 188.694 | 87.2 | 645 | 27.677 | 12.8 | 782 |
| 1977 | 227.198 | 1,450 | 197.311 | 86.8 | 654 | 29.887 | 13.2 | 796 |
| 1978 | 243.898 | 1,449 | 211.661 | 86.8 | 654 | 32.237 | 13.2 | 795 |
| 1979 | 250.643 | 1,460 | 217.105 | 86.6 | 649 | 33.538 | 13.4 | 811 |
| 1980 | 241.377 | 1,422 | 210.868 | 87.4 | 633 | 30.509 | 12.6 | 789 |
| 1981 | 246.152 | 1,427 | 214.971 | 87.3 | 631 | 31.181 | 12.7 | 796 |
| 1982 | 235.185 | 1,376 | 206.799 | 87.9 | 623 | 28.386 | 12.1 | 753 |
| 1983 | 252.539 | 1,370 | 221.652 | 87.8 | 614 | 30.887 | 12.2 | 756 |
| 1984 | 267.547 | 1,429 | 233.635 | 87.3 | 615 | 33.912 | 12.7 | 814 |
| 1985 | 267.453 | 1,460 | 233.518 | 87.3 | 630 | 33.935 | 12.7 | 830 |

## Shipments to Nondurable Goods Industries

72.8% Share of Total Shipments

Percent of Square Footage Shipped by Standard Industrial Classification of Customers




| MAJOR SIC GROUP* | | MANUFACTURING INDUSTRIES | 1983 - 54.4% 24 Companies-357 Plants | | 1984 - 47.7% 20 Companies-278 Plants | | 1985 - 56.0% 22 Companies-324 Plants | |
|---|---|---|---|---|---|---|---|---|
| 20 | | Food and Kindred Products (except 201, 202, 203, 205, 206, 208 and Fresh Fruits and Vegetables) | 8.4% | | 8.8% | | 9.2% | |
| | 201 | Meat Products | 7.3 | | 6.3 | | 5.8 | |
| | 202 | Dairy Products | 2.6 | | 2.4 | | 2.3 | |
| | 203 | Canning and Preserving Fruits, Vegetables, and Sea Foods | 6.3 | | 6.6 | | 5.4 | |
| | 205 | Bakery Products | 1.9 | 38.1% | 1.9 | 37.2% | 2.2 | 36.4% |
| | 206 | Confectionary and Related Products | 1.4 | | 1.2 | | 1.7 | |
| | 208 | Beverage Industry | 4.1 | | 4.2 | | 4.8 | |
| | 950** | Fresh Fruits and Vegetables | 6.1 | | 5.8 | | 5.0 | |
| 21 | | Tobacco Manufactures | | .7 | | .6 | | .7 |
| 22 | | Textile Mill Products (except 227) | 2.2 | | 1.7 | | 1.8 | |
| | 227 | Floor Covering Mills | .2 | 2.4 | .1 | 1.8 | .1 | 1.9 |
| 23 | | Apparel and Other Finished Products made from Fabrics and Similar Materials | | 1.7 | | 1.7 | | 1.5 |
| 26 | | Paper and Allied Products | | 12.9 | | 13.3 | | 13.9 |
| 27 | | Printing, Publishing, and Allied Industries (except 273) | 1.3 | | 1.3 | | 1.4 | |
| | 273 | Books | .4 | 1.7 | .3 | 1.6 | .3 | 1.7 |
| 28 | | Chemicals and Allied Products (except 282, 283, 284 and 285) | 1.7 | | 1.5 | | 1.6 | |
| | 282 | Plastics Materials and Synthetic Resins, Synthetic Rubber, Synthetic and Other Man-Made Fibers, Except Glass | 1.3 | | 1.2 | | 2.4 | |
| | 283 | Drugs | .6 | 6.7 | .6 | 6.6 | .6 | 7.8 |
| | 284 | Soap, Detergents and Cleaning Preparations, Perfumes, Cosmetics and Other Toilet Preparations | 2.7 | | 3.0 | | 2.9 | |
| | 285 | Paints, Varnishes, Lacquers, Enamels and Allied Products | .4 | | .3 | | .3 | |
| 29 | | Petroleum Refining and Related Industries (except (295) | .8 | | .7 | | .7 | |
| | 295 | Paving and Roofing Materials | .1 | .9 | .1 | .8 | .1 | .8 |
| 30 | | Rubber and Miscellaneous Plastics Products (except 307) | 1.1 | | 1.1 | | .9 | |
| | 307 | Miscellaneous Plastics Products | 5.0 | 6.1 | 5.8 | 6.9 | 6.8 | 7.7 |
| 31 | | Leather and Leather Products | | .5 | | .4 | | .4 |
| | | Sub-Total, Nondurable Goods | | 71.7 | | 70.9 | | 72.8 |

* Standard Industrial Classification ** This number was arbitrarily assigned; not in accordance with Standard Industrial Classification Manual

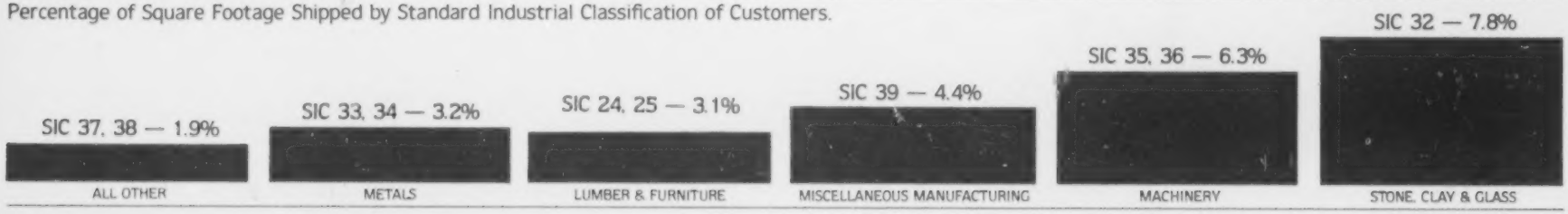
The sample as reported here, based on the number of companies indicated in the column headings, will not conform exactly to a complete analysis of sales. The percentages shown should be considered as indicators and not exact proportions. Differences in percentages from year to year can be caused by changes in the list of participating companies. Shipments to sheet plants and jobbers are not included. Companies included in the tabulation operate plants in all areas of the country.

# Shipments by End Use Industry

## Shipments to Durable Goods Industries

26.7% Share of Total Shipments

Percentage of Square Footage Shipped by Standard Industrial Classification of Customers.




| MAJOR SIC GROUP* | | MANUFACTURING INDUSTRIES | 1983 - 54.4% 24 Companies-357 Plants | | 1984 - 47.7% 20 Companies-278 Plants | | 1985 - 56.0% 22 Companies-324 Plants | |
|---|---|---|---|---|---|---|---|---|
| 24 | | Lumber and Wood Products, Except Furniture | | 1.0% | | .8% | | .7% |
| 25 | | Furniture and Fixtures (except 251) | 1.4% | | 1.5% | | 1.2% | |
| | 251 | Household Furniture | 1.7 | 3.1 | 1.5 | 3.0 | 1.2 | 2.4 |
| 32 | | Stone, Clay, and Glass Products (except 322, 326, and 329) | 1.1 | | 1.2 | | 1.2 | |
| | 322 | Glass and Glassware, Pressed or Blown | 5.3 | | 6.7 | | 6.0 | |
| | 326 | Pottery and Related Products | .3 | 7.1 | .2 | 8.4 | .2 | 7.8 |
| | 329 | Abrasive, Asbestos and Misc. Nonmetallic Mineral Products | .4 | | .3 | | .4 | |
| 33 | | Primary Metal Industries | | .7 | | .5 | | .4 |
| 34 | | Fabricated Metal Products, Except Ordnance, Machinery and Transportation Equipment (except 341) | 3.0 | | 2.9 | | 2.5 | |
| | 341 | Metal Cans | .3 | 3.3 | .3 | 3.2 | .3 | 2.8 |
| 35 | | Machinery, Except Electrical (except 358) | 1.5 | | 1.3 | | 1.0 | |
| | 358 | Service Industry Machines | .4 | 1.9 | .4 | 1.7 | .3 | 1.3 |
| 36 | | Electrical Machinery, Equipment and Supplies (except 363, 364, 365 and 366-367) | 1.1 | | 1.0 | | .9 | |
| | 363 | Household Appliances | 1.9 | | 1.8 | | 1.5 | |
| | 364 | Electric Lighting and Wiring Equipment | .8 | 4.5 | .9 | 4.7 | .8 | 5.0 |
| | 365 | Radio and TV Receiving Sets, Except Communication Types | .3 | | .5 | | .3 | |
| | 366-367 | Communication Equipment and Electronic Components and Accessories | .4 | | .5 | | 1.5 | |
| 37 | | Transportation Equipment (except 371) | .2 | | .2 | | .2 | |
| | 371 | Motor Vehicles and Motor Vehicle Equipment | 1.3 | 1.5 | 1.3 | 1.5 | 1.2 | 1.4 |
| 38 | | Professional, Scientific, and Controlling Instruments; Photographic and Optical Goods; Watches and Clocks | | .7 | | .6 | | .5 |
| 39 | | Miscellaneous Manufacturing Industries (except 394) | 2.9 | | 2.9 | | 3.6 | |
| | 394 | Toys, Amusement, Sporting and Athletic Goods | 1.1 | 4.0 | 1.2 | 4.1 | .8 | 4.4 |
| | | Sub-Total, Durable Goods | | 27.8 | | 28.5 | | 26.7 |
| | | Sub-Total, Durable Goods | | 27.8 | | 28.5 | | 26.7 |
| | | Sub-Total, Nondurable Goods | | 71.7 | | 70.9 | | 72.8 |
| 42 | | Motor Freight Transportation and Warehousing | | .4 | | .5 | | .4 |
| 90 | | Government | | .1 | | .1 | | .1 |
| | | TOTAL | | 100.0% | | 100.0% | | 100.0% |

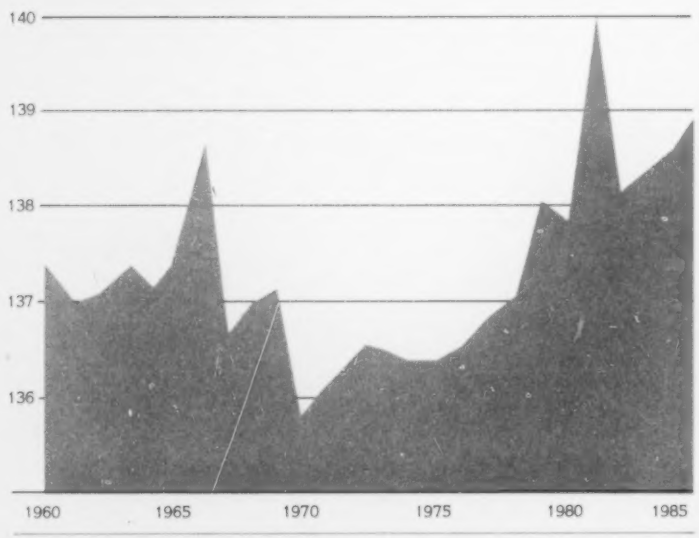
* Standard Industrial Classification

# Industry Corrugated Production by Type of Board

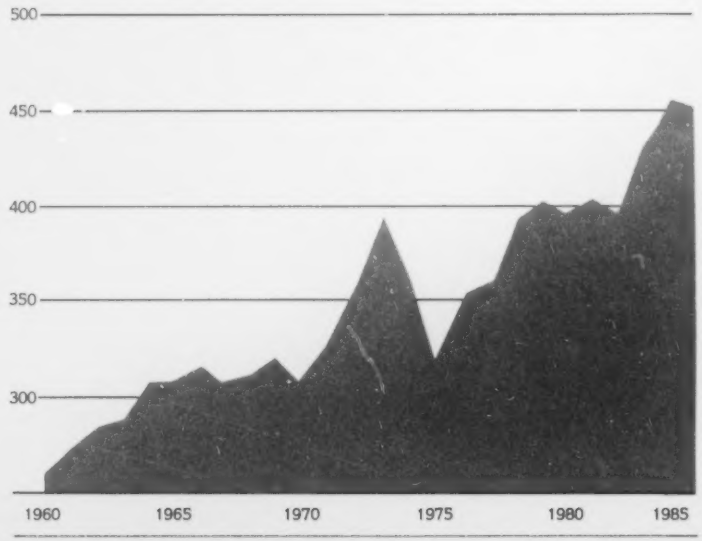
Billions of Square Feet

| YEAR | Single Face | % Of Total | Single Wall | % Of Total | Double & Triple Wall | % Of Total | Total |
|---|---|---|---|---|---|---|---|
| 1960 | 1.648 | 1.5% | 104.206 | 93.1% | 6.063 | 5.4% | 111.917 |
| 1961 | 1.486 | 1.3 | 110.095 | 93.1 | 6.607 | 5.6 | 118.188 |
| 1962 | 1.416 | 1.1 | 116.879 | 92.9 | 7.503 | 6.0 | 125.798 |
| 1963 | 1.453 | 1.1 | 123.037 | 92.6 | 8.372 | 6.3 | 132.862 |
| 1964 | 1.390 | 1.0 | 131.868 | 92.5 | 9.224 | 6.5 | 142.482 |
| 1965 | 1.400 | 0.9 | 141.941 | 92.4 | 10.231 | 6.7 | 153.572 |
| 1966 | 1.594 | 1.0 | 151.593 | 91.7 | 12.025 | 7.3 | 165.212 |
| 1967 | 1.569 | 0.9 | 154.918 | 92.1 | 11.807 | 7.0 | 168.294 |
| 1968 | 1.549 | 0.9 | 165.937 | 91.8 | 13.278 | 7.3 | 180.764 |
| 1969 | 1.592 | 0.8 | 177.426 | 91.7 | 14.571 | 7.5 | 193.589 |
| 1970 | 1.548 | 0.8 | 177.087 | 91.9 | 14.105 | 7.3 | 192.740 |
| 1971 | 1.461 | 0.7 | 183.775 | 91.7 | 15.119 | 7.6 | 200.355 |
| 1972 | 1.567 | 0.7 | 200.902 | 91.3 | 17.641 | 8.0 | 220.110 |
| 1973 | 1.490 | 0.6 | 216.841 | 90.9 | 20.196 | 8.5 | 238.527 |
| 1974 | 1.492 | 0.7 | 203.449 | 90.8 | 19.154 | 8.5 | 224.095 |
| 1975 | 1.166 | 0.6 | 186.172 | 91.6 | 15.892 | 7.8 | 203.230 |
| 1976 | 1.305 | 0.6 | 207.880 | 91.2 | 18.633 | 8.2 | 227.818 |
| 1977 | 1.216 | 0.5 | 217.184 | 91.0 | 20.401 | 8.5 | 238.801 |
| 1978 | 1.265 | 0.5 | 232.827 | 90.8 | 22.309 | 8.7 | 256.401 |
| 1979 | 1.166 | 0.4 | 236.670 | 90.7 | 23.236 | 8.9 | 261.072 |
| 1980 | 1.144 | 0.5 | 229.054 | 90.9 | 21.741 | 8.6 | 251.939 |
| 1981 | 1.126 | 0.5 | 229.808 | 90.8 | 22.098 | 8.7 | 253.032 |
| 1982 | 1.188 | 0.5 | 224.180 | 91.0 | 20.921 | 8.5 | 246.289 |
| 1983 | 1.232 | 0.5 | 240.302 | 90.9 | 22.669 | 8.6 | 264.203 |
| 1984 | 1.111 | 0.4 | 256.158 | 90.8 | 24.749 | 8.8 | 282.018 |
| 1985 | 1.011 | 0.4 | 258.810 | 90.8 | 24.989 | 8.8 | 284.810 |

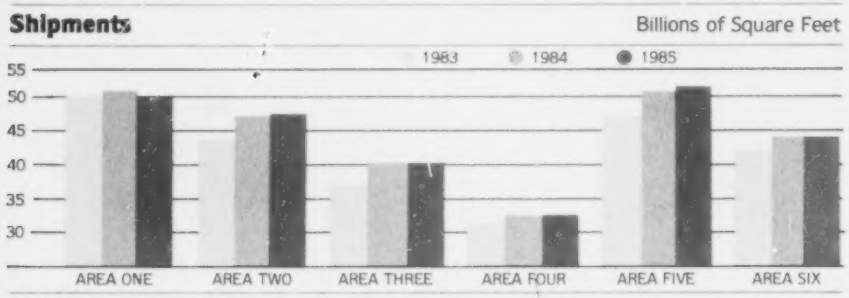
**Average Basis Weight** Pounds Per Thousand Square Feet

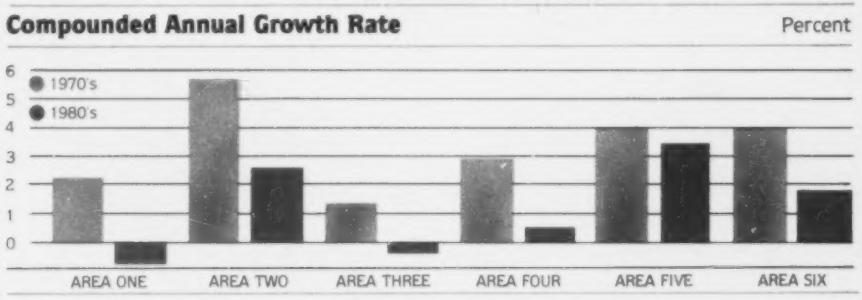



**Average Converting Plant Production** Millions of Square Feet



# Industry Shipments by Area




| | AREA 1 | | AREA 2 | | AREA 3 | | AREA 4 | | AREA 5 | | AREA 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | Total | % of Industry | Total | % of Industry | Total | % of Industry | Total | % of Industry | Total | % of Industry | Total | % of Industry |
| 1960 | 29,704 | 27.3% | 11,044 | 10.1% | 23,317 | 21.4% | 15,749 | 14.5% | 14,946 | 13.7% | 14,172 | 13.0% |
| 1961 | 30,574 | 26.7 | 12,083 | 10.6 | 23,759 | 20.7 | 16,539 | 14.4 | 16,194 | 14.1 | 15,412 | 13.5 |
| 1962 | 32,129 | 26.3 | 13,225 | 10.8 | 25,170 | 20.6 | 18,071 | 14.8 | 17,109 | 14.0 | 16,478 | 13.5 |
| 1963 | 33,723 | 26.2 | 14,209 | 11.0 | 26,562 | 20.6 | 18,730 | 14.6 | 17,955 | 14.0 | 17,484 | 13.6 |
| 1964 | 35,310 | 25.7 | 15,545 | 11.3 | 28,385 | 20.7 | 20,263 | 14.8 | 19,155 | 14.0 | 18,604 | 13.5 |
| 1965 | 37,710 | 25.4 | 17,419 | 11.7 | 30,938 | 20.9 | 21,843 | 14.7 | 20,663 | 13.9 | 19,898 | 13.4 |
| 1966 | 39,777 | 24.8 | 19,314 | 12.0 | 32,882 | 20.5 | 22,862 | 14.3 | 23,031 | 14.3 | 22,586 | 14.1 |
| 1967 | 39,949 | 24.6 | 20,483 | 12.6 | 32,363 | 19.9 | 22,703 | 13.9 | 24,223 | 14.9 | 22,875 | 14.1 |
| 1968 | 42,162 | 24.3 | 22,278 | 12.8 | 34,430 | 19.8 | 24,016 | 13.8 | 26,347 | 15.2 | 24,581 | 14.1 |
| 1969 | 44,378 | 23.9 | 24,707 | 13.3 | 36,320 | 19.5 | 25,186 | 13.6 | 28,358 | 15.3 | 26,703 | 14.4 |
| 1970 | 44,038 | 23.8 | 25,040 | 13.6 | 35,194 | 19.0 | 24,820 | 13.4 | 28,998 | 15.7 | 26,774 | 14.5 |
| 1971 | 44,813 | 23.4 | 27,163 | 14.2 | 36,374 | 18.9 | 25,877 | 13.5 | 30,248 | 15.8 | 27,356 | 14.2 |
| 1972 | 48,382 | 22.8 | 30,957 | 14.6 | 40,248 | 19.0 | 28,513 | 13.5 | 33,788 | 15.9 | 30,038 | 14.2 |
| 1973 | 51,019 | 22.4 | 33,561 | 14.7 | 42,689 | 18.7 | 30,760 | 13.5 | 37,083 | 16.3 | 32,941 | 14.4 |
| 1974 | 48,537 | 22.5 | 31,599 | 14.6 | 39,146 | 18.1 | 28,944 | 13.4 | 35,099 | 16.2 | 32,747 | 15.2 |
| 1975 | 42,183 | 21.7 | 29,403 | 15.1 | 34,134 | 17.6 | 25,541 | 13.2 | 32,092 | 16.5 | 30,976 | 15.9 |
| 1976 | 46,697 | 21.6 | 32,809 | 15.2 | 38,326 | 17.7 | 28,471 | 13.2 | 36,220 | 16.7 | 33,848 | 15.6 |
| 1977 | 48,301 | 21.3 | 35,187 | 15.5 | 39,845 | 17.5 | 29,611 | 13.0 | 38,646 | 17.0 | 35,609 | 15.7 |
| 1978 | 52,275 | 21.4 | 38,796 | 15.9 | 41,433 | 17.0 | 31,368 | 12.9 | 41,753 | 17.1 | 38,273 | 15.7 |
| 1979 | 53,322 | 21.3 | 41,586 | 16.6 | 41,071 | 16.4 | 31,819 | 12.7 | 43,175 | 17.2 | 39,670 | 15.8 |
| 1980 | 50,551 | 20.9 | 41,284 | 17.1 | 36,912 | 15.3 | 30,147 | 12.5 | 42,867 | 17.8 | 39,616 | 16.4 |
| 1981 | 50,100 | 20.4 | 41,651 | 16.9 | 37,618 | 15.3 | 30,032 | 12.2 | 45,169 | 18.3 | 41,582 | 16.9 |
| 1982 | 48,006 | 20.4 | 39,744 | 16.9 | 34,263 | 14.6 | 28,795 | 12.2 | 44,408 | 18.9 | 39,969 | 17.0 |
| 1983 | 50,263 | 19.9 | 44,108 | 17.5 | 37,194 | 14.7 | 31,249 | 12.4 | 47,442 | 18.8 | 42,283 | 16.7 |
| 1984 | 51,094 | 19.1 | 47,475 | 17.7 | 40,285 | 15.1 | 32,794 | 12.3 | 51,378 | 19.2 | 44,521 | 16.6 |
| 1985 | 50,078 | 18.7 | 47,958 | 17.9 | 40,281 | 15.1 | 32,731 | 12.2 | 52,110 | 19.5 | 44,295 | 16.6 |

# Area Shipments

Millions of Square Feet

| | AREA ONE | | | AREA TWO | | | AREA THREE | | |
|---|---|---|---|---|---|---|---|---|---|
| **By Quarter** | 1983 | 1984 | 1985 | 1983 | 1984 | 1985 | 1983 | 1984 | 1985 |
| 1st Quarter | 12,148.2 | 12,872.2 | 12,459.0 | 10,538.3 | 11,926.9 | 11,757.5 | 8,872.4 | 10,415.7 | 9,988.9 |
| 2nd Quarter | 12,577.3 | 12,931.7 | 12,542.1 | 11,130.7 | 12,025.9 | 12,064.0 | 9,121.5 | 10,149.8 | 10,011.4 |
| 3rd Quarter | 12,764.6 | 12,642.1 | 12,368.2 | 11,030.9 | 11,756.7 | 11,903.5 | 9,626.1 | 10,033.0 | 10,409.3 |
| 4th Quarter | 12,772.8 | 12,647.4 | 12,708.5 | 11,407.6 | 11,765.9 | 12,233.7 | 9,574.4 | 9,686.9 | 9,871.1 |
| **By Month** | | | | | | | | | |
| January | 3,968.8 | 4,116.8 | 4,370.1 | 3,461.7 | 3,863.5 | 4,140.5 | 2,897.8 | 3,369.2 | 3,522.7 |
| February | 3,630.1 | 4,138.4 | 3,906.1 | 3,310.1 | 3,914.6 | 3,677.6 | 2,750.4 | 3,366.0 | 3,068.1 |
| March | 4,549.4 | 4,617.1 | 4,182.8 | 3,766.5 | 4,148.7 | 3,939.5 | 3,224.2 | 3,680.6 | 3,398.1 |
| April | 3,976.6 | 4,192.4 | 4,215.7 | 3,663.5 | 3,972.6 | 4,194.4 | 2,973.9 | 3,314.2 | 3,444.1 |
| May | 4,124.7 | 4,365.5 | 4,224.9 | 3,664.0 | 4,114.2 | 4,055.2 | 2,980.7 | 3,473.8 | 3,378.5 |
| June | 4,476.0 | 4,373.8 | 4,101.5 | 3,803.2 | 3,939.1 | 3,814.4 | 3,167.0 | 3,361.8 | 3,188.8 |
| July | 3,715.6 | 3,841.9 | 3,896.0 | 3,373.8 | 3,774.4 | 3,933.6 | 2,788.4 | 3,137.1 | 3,350.1 |
| August | 4,494.8 | 4,593.5 | 4,339.8 | 3,886.7 | 4,174.3 | 4,073.9 | 3,432.4 | 3,598.0 | 3,606.8 |
| September | 4,554.2 | 4,206.7 | 4,132.5 | 3,770.4 | 3,808.0 | 3,895.9 | 3,405.4 | 3,297.8 | 3,452.4 |
| October | 4,578.1 | 4,794.2 | 4,891.6 | 4,024.3 | 4,251.3 | 4,600.5 | 3,474.0 | 3,706.2 | 3,898.5 |
| November | 4,152.5 | 4,105.2 | 4,017.8 | 3,739.0 | 3,799.5 | 3,877.0 | 3,189.6 | 3,135.0 | 3,125.1 |
| December | 4,042.2 | 3,748.0 | 3,799.0 | 3,644.4 | 3,715.1 | 3,756.1 | 2,910.8 | 2,845.6 | 2,847.6 |
| Total | 50,262.9 | 51,093.4 | 50,077.8 | 44,107.5 | 47,475.4 | 47,958.7 | 37,194.5 | 40,285.4 | 40,280.8 |
| **By Average Week** | | | | | | | | | |
| January | 915.9 | 950.0 | 971.1 | 798.9 | 891.6 | 920.1 | 668.7 | 777.5 | 782.8 |
| February | 907.5 | 993.2 | 976.5 | 827.5 | 939.5 | 919.4 | 687.6 | 807.8 | 767.0 |
| March | 1,011.0 | 1,026.0 | 965.3 | 837.0 | 921.9 | 909.1 | 716.5 | 817.9 | 784.2 |
| April | 917.7 | 1,006.2 | 972.8 | 845.4 | 953.4 | 967.9 | 686.3 | 795.4 | 794.8 |
| May | 951.8 | 970.1 | 938.9 | 845.5 | 914.3 | 901.1 | 687.9 | 772.0 | 750.8 |
| June | 1,032.9 | 1,009.3 | 984.4 | 877.7 | 909.0 | 915.5 | 730.8 | 775.8 | 765.3 |
| July | 857.4 | 886.6 | 865.8 | 778.6 | 871.0 | 874.1 | 643.5 | 724.0 | 744.5 |
| August | 998.8 | 1,020.8 | 964.4 | 863.7 | 927.6 | 905.3 | 762.7 | 799.6 | 801.5 |
| September | 1,051.0 | 1,009.6 | 991.8 | 870.1 | 913.9 | 935.0 | 785.9 | 791.5 | 828.6 |
| October | 1,056.5 | 1,065.4 | 1,087.0 | 928.7 | 944.7 | 1,022.3 | 801.7 | 823.6 | 866.3 |
| November | 958.3 | 947.4 | 927.2 | 862.8 | 876.8 | 894.7 | 736.1 | 723.5 | 721.2 |
| December | 898.3 | 864.9 | 876.7 | 809.9 | 857.3 | 866.8 | 646.8 | 656.7 | 657.1 |
| Average | 966.6 | 982.6 | 963.0 | 848.2 | 913.0 | 922.3 | 715.3 | 774.7 | 774.6 |

Millions of Square Feet

# Area Shipments

| | AREA FOUR | | | AREA FIVE | | | AREA SIX | | |
|---|---|---|---|---|---|---|---|---|---|
| **By Quarter** | 1983 | 1984 | 1985 | 1983 | 1984 | 1985 | 1983 | 1984 | 1985 |
| 1st Quarter | 7,563.4 | 8,373.2 | 8,031.2 | 11,518.8 | 12,838.4 | 12,891.8 | 9,667.0 | 10,912.8 | 10,583.0 |
| 2nd Quarter | 7,733.8 | 8,132.2 | 8,036.1 | 11,761.6 | 13,015.3 | 13,068.1 | 10,828.7 | 11,426.2 | 11,289.7 |
| 3rd Quarter | 8,109.5 | 8,340.5 | 8,457.7 | 11,962.7 | 12,963.0 | 13,204.2 | 11,121.4 | 11,229.5 | 11,656.2 |
| 4th Quarter | 7,842.2 | 7,948.5 | 8,205.6 | 12,198.6 | 12,561.5 | 12,945.9 | 10,666.2 | 10,951.9 | 10,766.1 |
| **By Month** | | | | | | | | | |
| January | 2,484.7 | 2,687.2 | 2,818.5 | 3,834.5 | 4,132.1 | 4,551.4 | 3,271.4 | 3,578.9 | 3,784.6 |
| February | 2,350.7 | 2,770.3 | 2,539.9 | 3,560.7 | 4,184.0 | 4,042.4 | 2,959.6 | 3,441.2 | 3,261.8 |
| March | 2,728.1 | 2,915.8 | 2,672.8 | 4,123.6 | 4,522.3 | 4,298.0 | 3,436.0 | 3,892.7 | 3,536.6 |
| April | 2,480.6 | 2,595.0 | 2,718.6 | 3,806.7 | 4,196.0 | 4,428.4 | 3,519.9 | 3,840.6 | 3,869.5 |
| May | 2,552.3 | 2,815.0 | 2,681.5 | 3,853.1 | 4,489.0 | 4,471.6 | 3,544.7 | 3,824.2 | 3,783.6 |
| June | 2,700.9 | 2,722.2 | 2,636.0 | 4,101.8 | 4,330.3 | 4,168.1 | 3,764.1 | 3,761.4 | 3,636.5 |
| July | 2,390.0 | 2,616.1 | 2,762.9 | 3,681.0 | 4,129.2 | 4,346.7 | 3,639.2 | 3,835.3 | 3,968.0 |
| August | 2,876.3 | 2,964.7 | 2,952.0 | 4,157.1 | 4,638.6 | 4,512.7 | 3,845.2 | 3,889.8 | 3,956.3 |
| September | 2,843.2 | 2,759.7 | 2,742.8 | 4,124.6 | 4,195.2 | 4,344.8 | 3,637.0 | 3,504.4 | 3,731.9 |
| October | 2,906.8 | 3,102.2 | 3,229.8 | 4,467.9 | 4,729.1 | 4,992.9 | 4,105.9 | 4,309.1 | 4,224.9 |
| November | 2,573.1 | 2,558.3 | 2,575.2 | 3,993.0 | 4,108.1 | 4,067.4 | 3,384.3 | 3,478.6 | 3,340.7 |
| December | 2,362.3 | 2,288.0 | 2,400.7 | 3,737.8 | 3,724.3 | 3,885.7 | 3,176.0 | 3,164.3 | 3,200.5 |
| Total | 31,249.0 | 32,794.4 | 32,730.7 | 47,441.6 | 51,378.3 | 52,110.0 | 42,283.4 | 44,520.4 | 44,294.9 |
| **By Average Week** | | | | | | | | | |
| January | 573.4 | 620.1 | 626.3 | 884.9 | 953.6 | 1,011.4 | 754.9 | 825.9 | 841.0 |
| February | 587.7 | 664.9 | 635.0 | 890.2 | 1,004.2 | 1,010.6 | 739.9 | 825.9 | 815.4 |
| March | 606.2 | 647.9 | 616.8 | 916.3 | 1,005.0 | 991.9 | 763.6 | 865.0 | 816.1 |
| April | 572.5 | 622.8 | 627.4 | 878.5 | 1,007.0 | 1,021.9 | 812.3 | 921.7 | 893.0 |
| May | 589.0 | 625.6 | 595.9 | 889.2 | 997.6 | 993.7 | 818.0 | 849.8 | 840.8 |
| June | 623.3 | 628.2 | 632.6 | 946.6 | 999.3 | 1,000.4 | 868.6 | 868.0 | 872.8 |
| July | 551.5 | 603.7 | 614.0 | 849.5 | 952.9 | 965.9 | 839.8 | 885.1 | 881.8 |
| August | 639.2 | 658.8 | 656.0 | 923.8 | 1,030.8 | 1,002.8 | 854.5 | 864.4 | 879.2 |
| September | 656.1 | 662.3 | 658.3 | 951.8 | 1,006.8 | 1,042.7 | 839.3 | 841.1 | 895.7 |
| October | 670.8 | 689.4 | 717.7 | 1,031.0 | 1,050.9 | 1,109.5 | 947.5 | 957.6 | 938.9 |
| November | 593.8 | 590.4 | 594.3 | 921.5 | 948.0 | 938.6 | 781.0 | 802.7 | 770.9 |
| December | 525.0 | 528.0 | 554.0 | 830.6 | 859.5 | 896.7 | 705.8 | 730.2 | 738.6 |
| Average | 600.9 | 630.7 | 629.4 | 912.3 | 988.0 | 1,002.1 | 813.1 | 856.2 | 851.8 |

# Containerboard Production & Consumption

Thousands of Tons

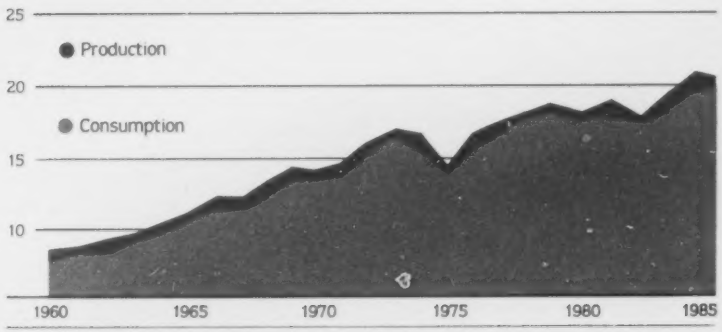
## Production for Domestic Use

| YEAR | TOTAL | LINERBOARD | | | CORRUGATING MATERIALS | | | Total Chip & Filler Boards |
|---|---|---|---|---|---|---|---|---|
| | | Kraft | Recycled | Total | Semi-chemical & Kraft | Recycled | Total | |
| 1960 | 8,186.6 | 4,731.2 | 743.6 | 5,474.8 | 1,788.9 | 672.1 | 2,461.0 | 250.8 |
| 1961 | 8,661.3 | 5,095.7 | 658.2 | 5,753.9 | 2,023.5 | 625.8 | 2,649.3 | 258.1 |
| 1962 | 9,299.0 | 5,514.7 | 701.8 | 6,216.5 | 2,188.8 | 633.3 | 2,822.1 | 260.4 |
| 1963 | 9,638.3 | 5,706.1 | 707.9 | 6,414.0 | 2,287.1 | 674.7 | 2,961.8 | 262.5 |
| 1964 | 10,341.9 | 6,188.0 | 719.5 | 6,907.5 | 2,447.4 | 717.7 | 3,165.1 | 269.3 |
| 1965 | 11,199.1 | 6,698.1 | 782.5 | 7,480.6 | 2,638.2 | 800.0 | 3,438.2 | 280.3 |
| 1966 | 12,459.6 | 7,550.2 | 797.1 | 8,347.3 | 2,909.8 | 890.0 | 3,799.8 | 312.5 |
| 1967 | 12,248.6 | 7,693.3 | 522.3 | 8,215.6 | 2,982.1 | 761.4 | 3,743.5 | 289.5 |
| 1968 | 13,388.4 | 8,612.2 | 431.5 | 9,043.7 | 3,371.2 | 690.7 | 4,061.9 | 282.8 |
| 1969 | 14,396.4 | 9,345.3 | 347.1 | 9,692.4 | 3,617.0 | 778.4 | 4,395.4 | 308.6 |
| 1970 | 13,964.3 | 9,133.4 | 269.7 | 9,403.1 | 3,404.7 | 859.3 | 4,264.0 | 297.2 |
| 1971 | 14,353.0 | 9,249.1 | 281.7 | 9,530.8 | 3,580.2 | 939.5 | 4,519.7 | 302.5 |
| 1972 | 16,019.0 | 10,577.6 | 278.9 | 10,856.5 | 3,874.2 | 972.3 | 4,846.5 | 315.9 |
| 1973 | 16,928.1 | 11,066.9 | 289.1 | 11,355.9 | 4,126.5 | 1,128.5 | 5,255.0 | 317.1 |
| 1974 | 16,767.0 | 10,838.4 | 467.1 | 11,305.4 | 4,010.3 | 1,169.0 | 5,179.2 | 282.3 |
| 1975 | 14,586.2 | 9,646.9 | 207.3 | 9,854.2 | 3,579.4 | 870.0 | 4,449.3 | 282.6 |
| 1976 | 16,700.2 | 11,093.2 | 282.7 | 11,375.9 | 3,986.5 | 1,075.1 | 5,061.5 | 262.9 |
| 1977 | 17,167.3 | 11,354.4 | 341.3 | 11,695.7 | 4,128.2 | 1,079.7 | 5,207.9 | 263.7 |
| 1978 | 17,908.2 | 11,877.2 | 256.4 | 12,133.7 | 4,305.3 | 1,197.7 | 5,503.1 | 271.5 |
| 1979 | 18,824.8 | 12,417.3 | 402.3 | 12,819.6 | 4,573.6 | 1,202.3 | 5,775.9 | 229.3 |
| 1980 | 18,070.2 | 11,948.6 | 444.5 | 12,393.1 | 4,398.5 | 1,047.1 | 5,445.6 | 231.5 |
| 1981 | 19,040.0 | 12,754.3 | 324.2 | 13,078.5 | 4,561.2 | 1,140.9 | 5,702.1 | 259.5 |
| 1982 | 17,507.5 | 11,656.5 | 279.0 | 11,935.5 | 4,202.5 | 1,139.3 | 5,341.8 | 230.2 |
| 1983 | 19,173.0 | 12,835.6 | 289.1 | 13,124.7 | 4,532.7 | 1,305.4 | 5,838.1 | 210.2 |
| 1984 | 20,855.1 | 14,068.8 | 203.7 | 14,272.5 | 5,018.9 | 1,385.4 | 6,404.3 | 178.4 |
| 1985* | 20,353.3 | 13,600.5 | 273.9 | 13,874.4 | 4,893.3 | 1,416.0 | 6,309.3 | 169.6 |

NOTE: The apparent disparity between containerboard production, consumption and inventories is attributable to two factors: (1) about 4% of production is diverted to other uses such as tube/stock, composite cans,/drums; (2) production includes container chip which is not consumed on solid fibre pasters. *Preliminary Source: American Paper Institute, Inc.

## Production vs Consumption

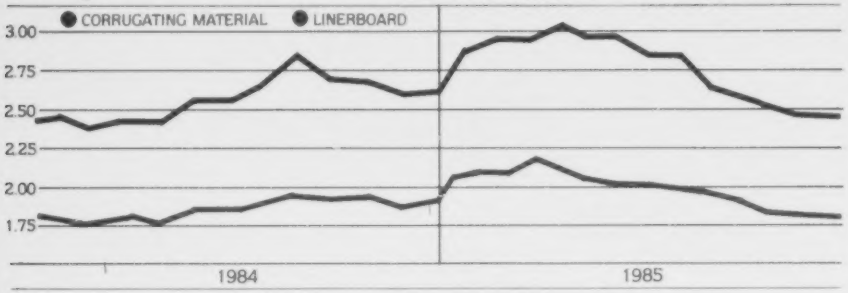
Millions of Tons



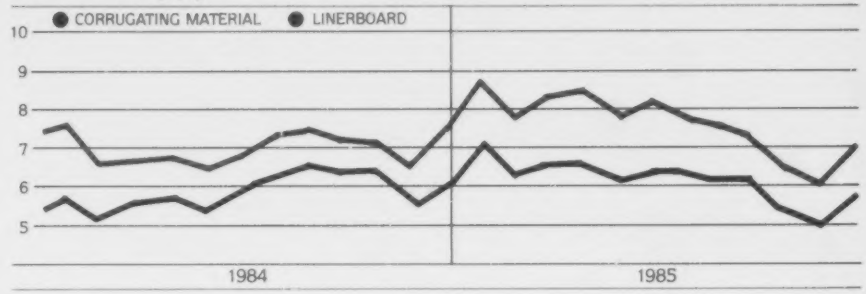

## Consumption by Box Plants

| YEAR | TOTAL | LINERBOARD | CORRUGATING MATERIALS | FILLER BOARD |
|---|---|---|---|---|
| 1960 | 7,901.3 | 5,361.6 | 2,422.2 | 117.5 |
| 1961 | 8,293.9 | 5,634.1 | 2,547.8 | 112.0 |
| 1962 | 8,820.4 | 6,000.0 | 2,716.5 | 103.9 |
| 1963 | 9,300.7 | 6,327.4 | 2,881.9 | 91.4 |
| 1964 | 9,949.1 | 6,763.9 | 3,091.8 | 93.4 |
| 1965 | 10,735.7 | 7,315.8 | 3,327.5 | 92.4 |
| 1966 | 11,707.9 | 7,996.5 | 3,592.1 | 119.3 |
| 1967 | 11,752.0 | 8,022.3 | 3,626.7 | 103.0 |
| 1968 | 12,616.8 | 8,625.9 | 3,885.9 | 105.0 |
| 1969 | 13,487.2 | 9,229.2 | 4,166.3 | 91.7 |
| 1970 | 13,267.5 | 9,079.0 | 4,107.1 | 81.4 |
| 1971 | 13,806.8 | 9,465.2 | 4,273.4 | 68.2 |
| 1972 | 15,189.4 | 10,428.8 | 4,697.7 | 62.9 |
| 1973 | 16,446.4 | 11,315.1 | 5,059.7 | 71.6 |
| 1974 | 15,428.8 | 10,621.2 | 4,746.2 | 61.4 |
| 1975 | 13,975.4 | 9,609.1 | 4,320.2 | 46.1 |
| 1976 | 15,677.1 | 10,782.0 | 4,844.4 | 50.7 |
| 1977 | 16,464.1 | 11,318.3 | 5,102.5 | 43.3 |
| 1978 | 17,708.7 | 12,168.4 | 5,494.7 | 45.6 |
| 1979 | 18,159.7 | 12,456.0 | 5,654.5 | 49.2 |
| 1980 | 17,489.5 | 12,018.5 | 5,427.4 | 43.6 |
| 1981 | 17,821.2 | 12,262.4 | 5,530.4 | 28.4 |
| 1982 | 17,117.9 | 11,751.3 | 5,337.4 | 29.2 |
| 1983 | 18,395.7 | 12,594.4 | 5,767.7 | 33.6 |
| 1984 | 19,672.7 | 13,460.9 | 6,176.6 | 35.2 |
| 1985 | 19,902.5 | 13,604.7 | 6,267.3 | 30.5 |

**Tonnage** Millions of Tons




**Weeks of Supply**




| 1984 | Jan 1 | Feb 1 | Mar 1 | Apr 1 | May 1 | Jun 1 | Jul 1 | Aug 1 | Sep 1 | Oct 1 | Nov 1 | Dec 1 | Jan 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | 1985 |
| Linerboard: | | | | | | | | | | | | | |
| Box Plants | 1,630.1 | 1,532.7 | 1,560.7 | 1,558.6 | 1,605.7 | 1,630.3 | 1,726.7 | 1,786.6 | 1,747.1 | 1,723.3 | 1,651.7 | 1,634.1 | 1,784.1 |
| Mills | 179.6 | 218.8 | 215.1 | 197.6 | 200.0 | 183.6 | 180.1 | 179.5 | 185.4 | 196.9 | 217.4 | 280.0 | 319.2 |
| Total | 1,809.7 | 1,751.5 | 1,775.8 | 1,756.2 | 1,805.7 | 1,813.9 | 1,906.8 | 1,966.1 | 1,932.5 | 1920.2 | 1,869.1 | 1,914.1 | 2,103.3 |
| Wks. of Supply | 7.8 | 6.5 | 6.7 | 6.8 | 6.5 | 6.8 | 7.4 | 7.5 | 7.3 | 7.1 | 6.5 | 7.5 | 8.9 |
| Corr. Mat'ls: | | | | | | | | | | | | | |
| Box Plants | 595.7 | 613.7 | 644.2 | 648.2 | 668.3 | 686.9 | 715.9 | 760.9 | 742.3 | 735.9 | 683.7 | 661.5 | 684.8 |
| Mills | 24.6 | 37.0 | 38.5 | 37.5 | 33.1 | 34.0 | 29.6 | 35.5 | 29.3 | 37.9 | 42.0 | 66.9 | 88.4 |
| Total | 620.3 | 650.7 | 682.7 | 685.7 | 701.4 | 720.9 | 745.5 | 796.4 | 771.6 | 773.9 | 725.7 | 728.4 | 773.2 |
| Wks. of Supply | 5.8 | 5.2 | 5.6 | 5.7 | 5.5 | 5.9 | 6.3 | 6.6 | 6.4 | 6.3 | 5.5 | 6.3 | 7.1 |
| Filler Board: | 6.5 | 6.2 | 7.3 | 5.5 | 5.0 | 5.3 | 5.7 | 3.5 | 6.0 | 6.2 | 5.4 | 5.6 | 3.7 |
| Total Contbd: | 2,436.7 | 2,407.8 | 2,466.1 | 2,447.5 | 2,512.3 | 2,540.5 | 2,658.6 | 2,766.8 | 2,710.5 | 2701.8 | 2,601.7 | 2,649.5 | 2,881.6 |
| Wks. of Supply | | | | | | | | | | | | | |
| At Box Plants | 6.6 | 5.4 | 5.7 | 5.8 | 5.6 | 6.0 | 6.5 | 6.6 | 6.5 | 6.3 | 5.6 | 6.2 | 7.2 |
| At Mill Sites | .6 | .6 | .7 | .6 | .6 | .5 | .6 | .6 | .5 | .6 | .6 | .9 | 1.2 |
| Total | 7.2 | 6.0 | 6.4 | 6.4 | 6.2 | 6.5 | 7.1 | 7.2 | 7.0 | 6.9 | 6.2 | 7.1 | 8.4 |

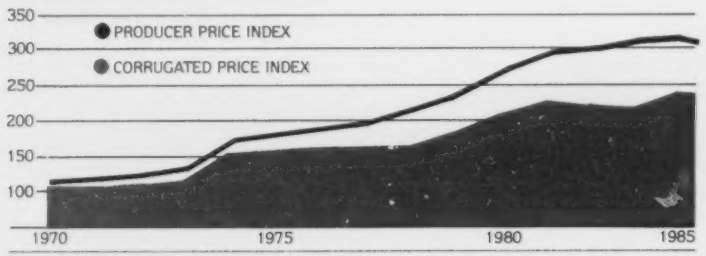
| 1985 | | | | | | | | | | | | | 1986 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Linerboard: | | | | | | | | | | | | | |
| Box Plants | 1,784.1 | 1,755.7 | 1,735.3 | 1,769.8 | 1,757.9 | 1,714.3 | 1,634.1 | 1,664.1 | 1,563.0 | 1,523.1 | 1,522.8 | 1,523.4 | 1,617.7 |
| Mills | 319.2 | 417.1 | 425.7 | 447.6 | 429.3 | 442.4 | 429.6 | 392.7 | 372.6 | 324.2 | 280.3 | 263.5 | 229.1 |
| Total | 2,103.3 | 2,172.8 | 2,161.0 | 2,217.4 | 2,187.2 | 2,156.7 | 2,063.7 | 2,056.8 | 1,935.6 | 1,847.3 | 1,803.1 | 1,786.9 | 1,846.8 |
| Wks. of Supply | 8.9 | 7.9 | 8.2 | 8.5 | 7.8 | 8.2 | 7.9 | 7.8 | 7.4 | 6.5 | 6.1 | 7.0 | 7.5 |
| Corr. Mat'ls: | | | | | | | | | | | | | |
| Box Plants | 684.8 | 674.6 | 677.1 | 684.3 | 686.1 | 674.7 | 668.4 | 664.9 | 655.7 | 622.2 | 610.6 | 605.0 | 642.7 |
| Mills | 88.4 | 115.8 | 113.7 | 113.1 | 105.4 | 105.7 | 98.9 | 90.6 | 94.4 | 86.0 | 69.5 | 70.8 | 53.5 |
| Total | 773.2 | 790.4 | 790.8 | 797.4 | 791.5 | 780.4 | 767.3 | 755.5 | 750.1 | 708.2 | 680.1 | 675.8 | 696.2 |
| Wks. of Supply | 7.1 | 6.3 | 6.6 | 6.7 | 6.2 | 6.4 | 6.4 | 6.2 | 6.2 | 5.4 | 5.0 | 5.8 | 6.1 |
| Filler Board: | 3.7 | 5.6 | 2.7 | 6.4 | 6.5 | 6.2 | 6.4 | 6.4 | 5.2 | 5.0 | 4.9 | 4.1 | 3.9 |
| Total Contbd: | 2,881.6 | 2,970.0 | 2,955.4 | 3,022.6 | 2,986.6 | 2,945.1 | 2,838.4 | 2,821.3 | 2,694.3 | 2,560.6 | 2,491.5 | 2469.4 | 2,548.9 |
| Wks. of Supply | | | | | | | | | | | | | |
| At Box Plants | 7.2 | 6.1 | 6.3 | 6.5 | 6.0 | 6.2 | 6.1 | 6.0 | 5.8 | 5.1 | 5.0 | 5.7 | 6.3 |
| At Mill Sites | 1.2 | 1.3 | 1.4 | 1.5 | 1.3 | 1.4 | 1.4 | 1.3 | 1.2 | 1.0 | .8 | .9 | .8 |
| Total | 8.4 | 7.4 | 7.7 | 8.0 | 7.3 | 7.6 | 7.5 | 7.3 | 7.0 | 6.1 | 5.8 | 6.6 | 7.1 |

# Corrugated Price & Producer Price Index

1967 = 100

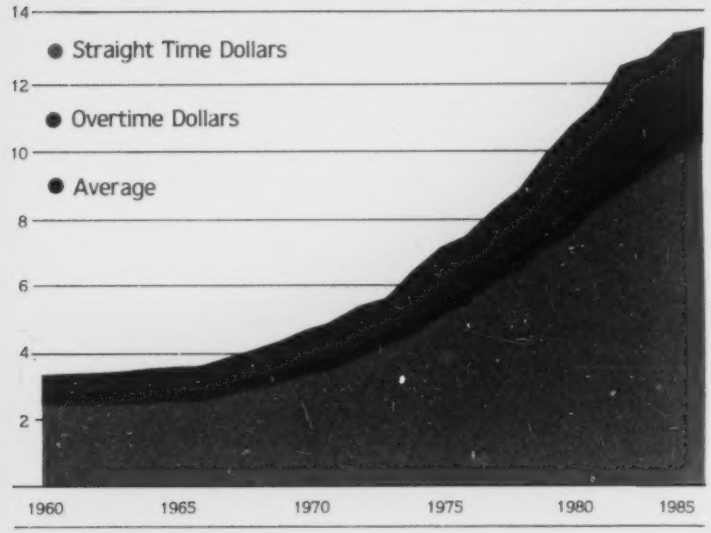
| YEAR | 1ST QTR | 2ND QTR | 3RD QTR | 4TH QTR | YEAR | B.L.S. P.P.I |
|---|---|---|---|---|---|---|
| 1960 | 98.8 | 98.2 | 96.3 | 97.0 | 97.4 | 94.9 |
| 1961 | 95.7 | 94.0 | 90.6 | 94.5 | 93.4 | 94.5 |
| 1962 | 94.9 | 97.1 | 95.5 | 96.2 | 95.9 | 94.8 |
| 1963 | 95.1 | 94.0 | 92.9 | 95.5 | 94.1 | 94.5 |
| 1964 | 95.1 | 94.5 | 92.7 | 94.2 | 94.0 | 94.7 |
| 1965 | 93.8 | 93.9 | 92.8 | 96.3 | 94.3 | 96.6 |
| 1966 | 96.7 | 98.2 | 97.8 | 100.4 | 98.3 | 99.8 |
| 1967 | 100.7 | 100.2 | 98.6 | 100.4 | 100.0 | 100.0 |
| 1968 | 101.9 | 101.0 | 99.3 | 102.0 | 101.1 | 102.5 |
| 1969 | 102.4 | 102.9 | 102.3 | 105.1 | 103.3 | 106.5 |
| 1970 | 105.3 | 104.9 | 103.8 | 105.0 | 104.8 | 110.4 |
| 1971 | 104.4 | 104.7 | 103.4 | 104.1 | 104.2 | 113.9 |
| 1972 | 104.2 | 106.7 | 107.0 | 110.8 | 107.4 | 119.1 |
| 1973 | 114.1 | 120.2 | 124.7 | 129.8 | 122.5 | 134.7 |
| 1974 | 135.4 | 147.7 | 161.0 | 170.6 | 153.2 | 160.1 |
| 1975 | 168.1 | 166.0 | 163.7 | 165.0 | 165.5 | 174.9 |
| 1976 | 169.0 | 170.9 | 168.9 | 169.6 | 169.6 | 183.0 |
| 1977 | 167.4 | 168.2 | 168.6 | 168.4 | 168.2 | 194.2 |
| 1978 | 164.7 | 165.7 | 166.9 | 174.5 | 168.1 | 209.3 |
| 1979 | 178.6 | 187.3 | 190.3 | 199.6 | 188.9 | 235.6 |
| 1980 | 209.7 | 214.3 | 212.9 | 214.4 | 212.8 | 268.8 |
| 1981 | 222.8 | 232.5 | 232.4 | 232.6 | 230.0 | 293.4 |
| 1982 | 229.4 | 229.6 | 223.2 | 221.3 | 225.9 | 299.4 |
| 1983 | 217.3 | 218.6 | 217.2 | 224.8 | 219.5 | 303.1 |
| 1984 | 230.0 | 242.6 | 242.6 | 254.1 | 242.3 | 310.3 |
| 1985 | 254.0 | 246.5 | 231.5 | 227.2 | 239.7 | 308.8 |

## Corrugated Price Index vs Producer Price Index

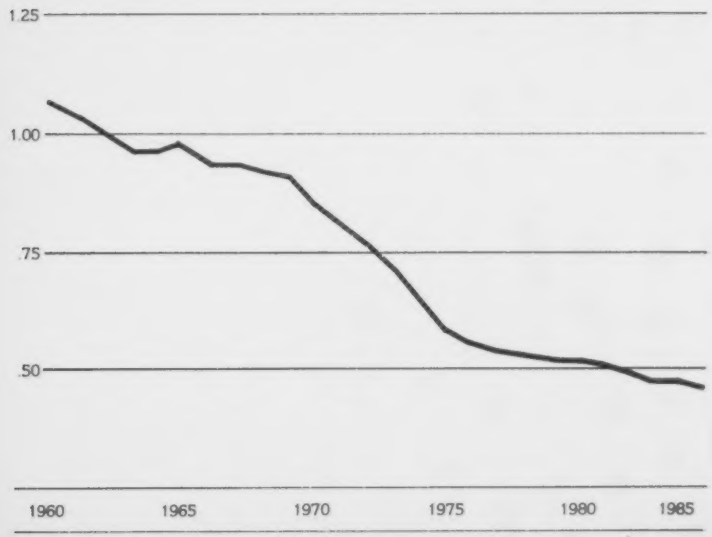



| Corrugated Price Index by Area | 1983 | 1984 | 1985 |
|---|---|---|---|
| **Area One - Northeastern** | | | |
| 1st Quarter | 211.3 | 224.0 | 246.3 |
| 2nd Quarter | 209.8 | 234.5 | 238.0 |
| 3rd Quarter | 209.7 | 236.2 | 228.0 |
| 4th Quarter | 217.8 | 248.7 | 222.6 |
| YEAR | 211.8 | 235.8 | 233.7 |
| **Area Two - Southeastern** | | | |
| 1st Quarter | 217.5 | 231.6 | 254.1 |
| 2nd Quarter | 218.8 | 245.3 | 246.1 |
| 3rd Quarter | 213.9 | 243.5 | 228.0 |
| 4th Quarter | 227.5 | 259.3 | 226.1 |
| YEAR | 219.5 | 244.8 | 238.5 |
| **Area Three - East Central** | | | |
| 1st Quarter | 209.0 | 224.3 | 251.3 |
| 2nd Quarter | 210.4 | 236.3 | 241.6 |
| 3rd Quarter | 212.5 | 237.0 | 227.4 |
| 4th Quarter | 219.8 | 250.2 | 223.9 |
| YEAR | 213.0 | 236.7 | 235.9 |
| **Area Four - North Central** | | | |
| 1st Quarter | 217.1 | 232.0 | 257.2 |
| 2nd Quarter | 216.0 | 245.1 | 247.4 |
| 3rd Quarter | 215.4 | 244.3 | 232.6 |
| 4th Quarter | 225.0 | 257.0 | 231.2 |
| YEAR | 218.4 | 244.4 | 241.9 |
| **Area Five - South Central** | | | |
| 1st Quarter | 210.0 | 222.0 | 243.0 |
| 2nd Quarter | 210.4 | 230.8 | 235.1 |
| 3rd Quarter | 207.1 | 230.2 | 217.4 |
| 4th Quarter | 215.2 | 242.6 | 214.5 |
| YEAR | 210.6 | 230.8 | 227.4 |
| **Area Six - Western** | | | |
| 1st Quarter | 246.8 | 255.9 | 280.1 |
| 2nd Quarter | 253.2 | 271.9 | 279.6 |
| 3rd Quarter | 252.6 | 273.0 | 264.6 |
| 4th Quarter | 250.4 | 275.4 | 253.8 |
| YEAR | 250.9 | 269.2 | 269.5 |

**Hourly Earnings** Dollars



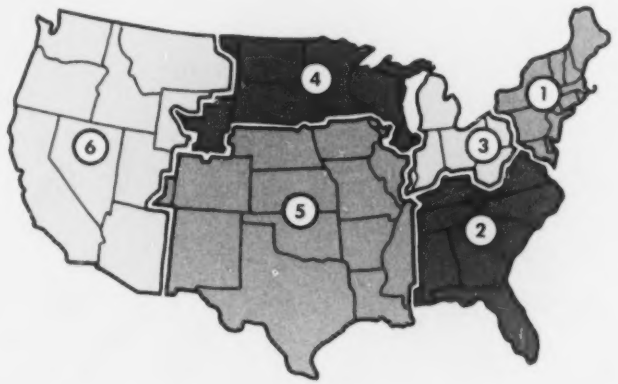

**Productivity** Hours per M.S.F.




| | | | INDUSTRY AVERAGES | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Hourly Earnings | | | | | | |
| YEAR | Total No. of Employees | Hours per Week per Employee | Total | Regular | Overtime | Earnings per Week per Employee | M Sq. Ft. Shipments per Wk. per Employee | Employee Hours per M Sq. Ft. | Payroll per M Sq. Ft. All Plants |
| 1960 | 54,600 | 40.9 | $2.224 | $2.324 | $3.238 | $ 95.21 | 38.7 | 1.06 | $2.46 |
| 1961 | 55,200 | 41.7 | 2.455 | 2.344 | 3.346 | 102.48 | 40.5 | 1.03 | 2.53 |
| 1962 | 57,400 | 41.5 | 2.529 | 2.418 | 3.435 | 104.82 | 41.4 | 1.00 | 2.53 |
| 1963 | 60,300 | 41.6 | 2.605 | 2.487 | 3.543 | 108.40 | 42.3 | .98 | 2.56 |
| 1964 | 62,400 | 42.1 | 2.687 | 2.562 | 3.604 | 113.22 | 43.0 | .98 | 2.63 |
| 1965 | 66,100 | 43.3 | 2.750 | 2.613 | 3.661 | 119.00 | 43.7 | .99 | 2.72 |
| 1966 | 70,300 | 42.8 | 2.850 | 2.699 | 3.819 | 121.98 | 44.9 | .95 | 2.71 |
| 1967 | 69,900 | 41.4 | 2.995 | 2.861 | 3.995 | 124.13 | 43.8 | .95 | 2.84 |
| 1968 | 74,000 | 42.0 | 3.157 | 2.986 | 4.245 | 132.62 | 44.8 | .94 | 2.96 |
| 1969 | 76,900 | 42.2 | 3.330 | 3.159 | 4.467 | 140.48 | 45.3 | .93 | 3.10 |
| 1970 | 74,100 | 40.1 | 3.551 | 3.415 | 4.811 | 142.39 | 46.6 | .86 | 3.06 |
| 1971 | 73,400 | 40.9 | 3.833 | 3.684 | 5.083 | 156.75 | 50.5 | .81 | 3.10 |
| 1972 | 74,300 | 41.5 | 4.132 | 3.944 | 5.508 | 171.57 | 54.9 | .76 | 3.13 |
| 1973 | 77,400 | 40.8 | 4.404 | 4.214 | 5.855 | 179.59 | 57.3 | .71 | 3.13 |
| 1974 | 71,900 | 38.3 | 4.725 | 4.566 | 6.428 | 181.02 | 57.4 | .67 | 3.16 |
| 1975 | 60,500 | 37.9 | 5.261 | 5.075 | 7.156 | 199.49 | 59.8 | .63 | 3.33 |
| 1976 | 65,200 | 38.9 | 5.726 | 5.513 | 7.683 | 222.59 | 63.3 | .61 | 3.52 |
| 1977 | 65,100 | 39.5 | 6.265 | 6.030 | 8.384 | 247.59 | 66.5 | .59 | 3.72 |
| 1978 | 67,300 | 39.6 | 6.820 | 6.541 | 9.057 | 270.39 | 69.8 | .57 | 3.88 |
| 1979 | 67,500 | 39.2 | 7.421 | 7.143 | 9.947 | 291.26 | 74.0 | .53 | 3.94 |
| 1980 | 63,600 | 38.2 | 7.968 | 7.697 | 10.823 | 304.16 | 72.4 | .53 | 4.20 |
| 1981 | 63,100 | 37.3 | 8.747 | 8.488 | 11.518 | 327.62 | 73.6 | .51 | 4.45 |
| 1982 | 59,100 | 36.8 | 9.340 | 9.081 | 12.537 | 343.78 | 74.4 | .50 | 4.62 |
| 1983 | 59,600 | 37.8 | 9.803 | 9.472 | 12.777 | 370.69 | 79.9 | .47 | 4.84 |
| 1984 | 61,500 | 38.5 | 10.278 | 9.913 | 13.320 | 395.78 | 82.3 | .47 | 4.81 |
| 1985 | 63,900 | 37.8 | 10.654 | 10.291 | 13.740 | 402.31 | 81.9 | .46 | 4.91 |

The reports received from the members are advanced to represent the entire industry. The employees represented are production workers, truckers, chauffeurs, watchmen, engineers, maintenance workers, etc. The total does not include executives, supervisors, salespersons, clerical and office employees. The footage includes the total shipments of all converting plants but not sheet plants; however, sheet plant labor costs are included. The above data covers only the direct payroll including pay for hours not worked. It does not include cost of pensions, medical insurance, etc.

# Statistical Areas & Definitions




**The Fibre Box Association has divided The United States into six Areas for statistical purposes.**

| | | |
|---|---|---|
| Area 1—Northeastern | Area 3—East Central | Area 5—South Central |
| Area 2—Southeastern | Area 4—North Central | Area 6—Western |

**Areas:** The United States is divided into six statistical Areas. The boundaries of Areas 4, 5 and 6 were modified in 1980, and all prior-year data has been amended accordingly.

**Average Week:** An average work week for statistical purposes consists of six working days.

**Basis Weight:** The average weight of combined corrugated board per thousand square feet is derived by dividing containerboard consumption for corrugated board by corrugator production.

**Containerboard:** Paperboard components from which corrugated and solid fibreboard are manufactured.

**Container Chip and Filler Board:** Paperboard manufactured as a filler for solid fibre and paperboard for conversion into either single or multi-ply components for interior packing in corrugated or solid fibre boxes.

**Converter and Sheet Plant:** A converter makes corrugated board on one or more corrugating machines, and makes boxes from the board. A sheet plant buys corrugated board from a converting plant, and makes boxes from the board.

**Corrugated Price Index:** The Corrugated Price Index is developed by dividing the total dollars of sales of all corrugated products by the square footage of these products, based on member company data only. The price per M square feet of all corrugated products shipped by members is then converted to an index, 1967=100.

**Corrugating Materials:** Paperboard used as the fluted member of a corrugated product, usually .009 or .010 of an inch thick.

**Corrugated Production:** The actual total square footage produced on corrugators during the year. It differs from shipments in that production includes waste and trim before fabrication.

**Filler Board:** See Container Chip and Filler Board.

**Industry:** Any statistic termed "Industry," such as "Industry Shipments," is based upon information received from all manufacturers, both members and non-members of the Association.

**Kraft Linerboard:** Fiber furnish contains not less than eighty percent virgin sulphate woodpulp, produced by the kraft (sulphate) process.

**Linerboard:** Paperboard used as a facing on corrugated or solid fibre products.

**Number of Plants:** The data indicates the number of plants in each category which were in operation during all or any part of the year. This is not necessarily the number in operation at year-end.

**Producer Price Index:** The Bureau of Labor Statistics' Producer Price Index represents the wholesale prices of about 2,000 commodities, 1967=100.

**Recycled Corrugating Material:** Fiber furnish contains less than seventy-five percent virgin woodpulp.

**Recycled Linerboard:** Fiber furnish contains less than eighty percent virgin sulphate woodpulp.

**Seasonally Adjusted Month:** Actual shipments are seasonally adjusted using factors based on experience of the latest and preceding years.

**Seasonal Adjustment:** The adjustment factor is a composite of the seasonal factors and the regression trading day adjustment factors. The adjustment is continually revised; factors used in 1983 and 1984 are not identical to those used in 1985.

**Semichemical Corrugating Material:** Contains fiber furnish not less than seventy-five percent virgin woodpulp, produced by a semichemical process. Also includes kraft corrugating material in which the fiber furnish is not less than eighty percent virgin woodpulp that is produced by the kraft (sulphate) process.

**Weeks of Supply:** Obtained by dividing inventories by the average weekly usage in fibre box plants during the prior month excluding any holidays.